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# 1. BACKGROUND AND OVERVIEW

## INTRODUCTION TO TOMPKINS COUNTY

Located in Upstate New York, Tompkins County contains nine towns, six villages and is home to the City of Ithaca, one of the principal cities of the scenic Finger Lakes region (see **FIGURE 1**). The City of Ithaca, which is centrally located within Tompkins County, is situated at the southern end of Lake Cayuga and serves as the activity hub for the County and indeed for a greater multi-county region. The area is characterized by topography that is restricted and interrupted by the aftereffects of past glacial activity that created the Finger Lakes region. The climate of the area is variable and is characterized by well-defined seasons. The County is best known as an education center, as it is home to Cornell University, Ithaca College, and Tompkins Cortland Community College. These institutions provide important sources of revenue, employment, and cultural amenities for the residents of Tompkins County as well as surrounding counties.

### Establishment of the Metropolitan Planning Organization

The establishment of Metropolitan Planning Organizations (MPOs) has been a federally mandated requirement since the 1962 Federal-Aid Highway Act. MPOs are established in each urbanized area of more than 50,000 population by agreement among the Governor and units of general purpose local government. The 1990 Census revealed that Tompkins County had exceeded the 50,000 population threshold within the Census-defined urbanized area. As a result of the 2000 Census, the Ithaca urbanized area was redefined to include a population of 53,528. This area is composed of the City of Ithaca, the Village of Cayuga Heights, the Village of Lansing, most of the Town of Ithaca, and small portions of the Towns of Caroline, Dryden, Lansing, Newfield, and Ulysses (see **FIGURE 2**).

On September 30, 1992, the Governor of the State of New York joined with local municipalities, Tompkins County, and the New York State Department of Transportation in executing the Memorandum of Agreement formally designating the *Ithaca-Tompkins County Transportation Council (ITCTC)* as the MPO for the Ithaca urbanized area.

As the designated MPO for the Ithaca metropolitan area, the *ITCTC* is responsible for conducting a transportation planning process that is "continuing, cooperative, and comprehensive". In order to achieve this objective, the *ITCTC* is structured at three levels.

The **Transportation Policy Committee** is the final MPO decision-making authority and is composed of the primary elected official from each member government. Cornell University, the New York State Department of Transportation, the Federal Highway Administration, the Federal Transit Administration and Tompkins Consolidated Area Transit (TCAT) are also represented on the Policy Committee.

The **Transportation Planning Committee** is responsible for coordinating and managing the area's transportation planning activities and providing technical assistance to the Policy Committee. The Planning Committee is composed primarily of lead technical staff members from the member entities.

The **Central Staff** is responsible for performing the administrative and technical services necessary to operate the MPO.

The operations and procedures of the *ITCTC* are guided by the Unified Operations Plan, originally adopted by formal resolution in August, 1992 and updated in May 2000. This document specifies that the Transportation Planning Committee is responsible for development of the Comprehensive Long-Range Transportation Plan.

On September 14, 1993, the Transportation Policy Committee adopted Resolution 1993-19, *Establishing the Metropolitan Area Boundary for the Ithaca-Tompkins County Transportation Council*. According to federal legislation, "each metropolitan area shall cover at least the existing urbanized area and the contiguous area expected to become urbanized within the 20-year forecast period" (23 USC §134(c)). This initial resolution established the urbanized area around the City of Ithaca as the regulatory planning area for a period ending December 18, 1994. On December 13, 1994, the Transportation Policy Committee adopted Resolution 1994-9, *Amending The Metropolitan Planning Area Boundary For The Ithaca-Tompkins County Transportation Council*. This resolution expanded the Metropolitan Area Planning Boundary to be contiguous with the geographical boundary of Tompkins County.

FIGURE 1

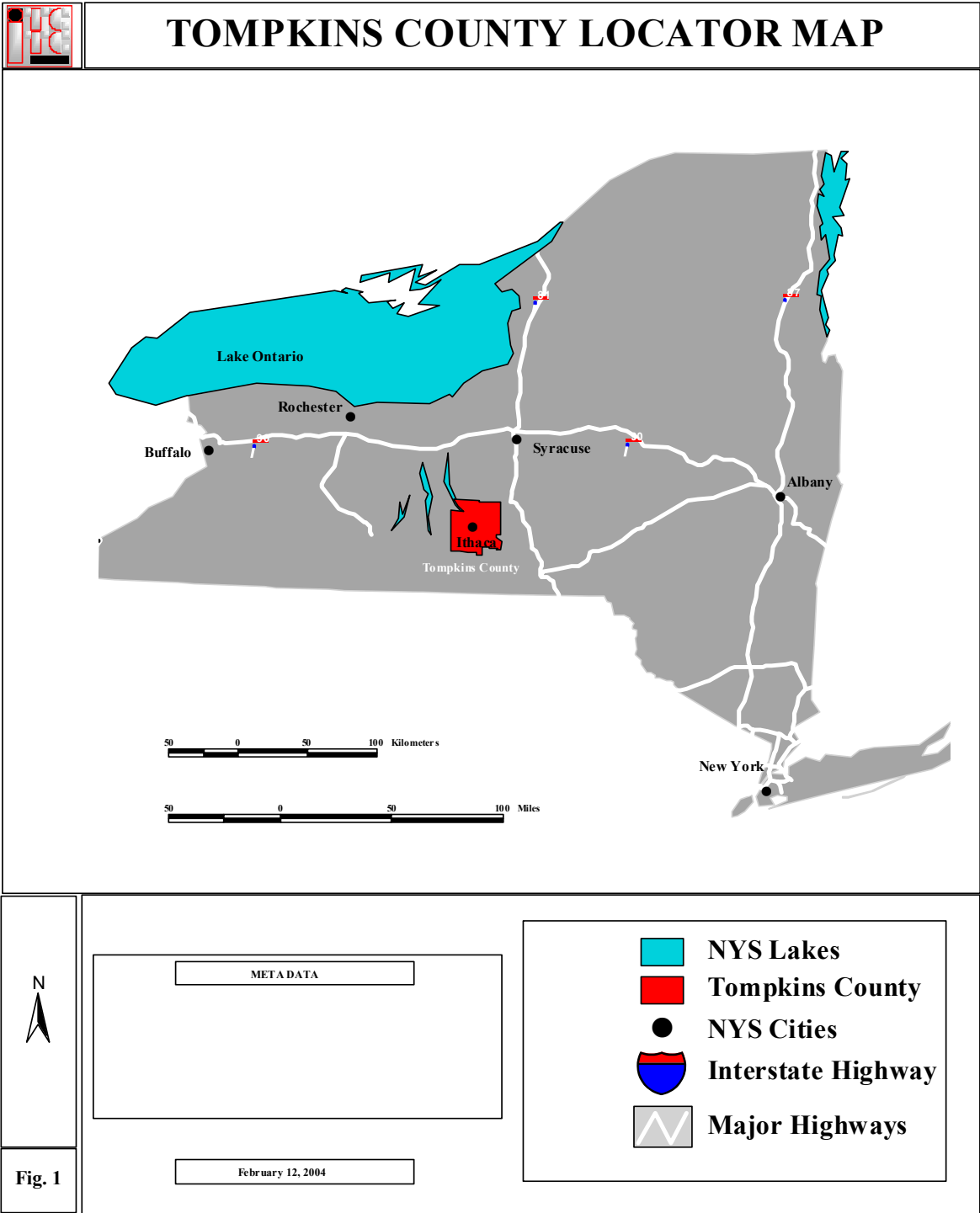
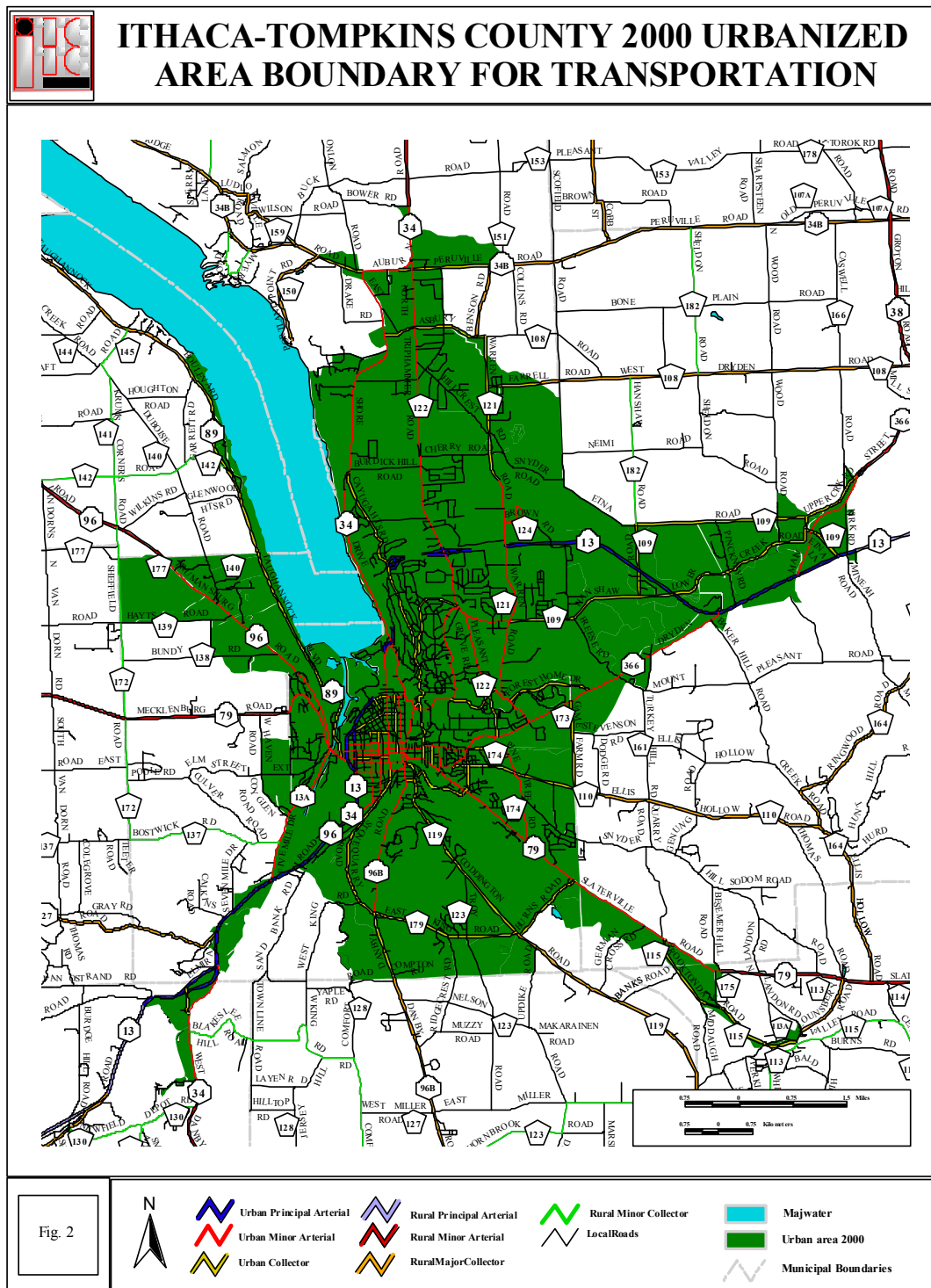


FIGURE 2



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## **Demographic Characteristics**

The purpose of this chapter is not to provide a detailed demographic analysis, but rather to provide a "snapshot" of demographic characteristics that may have significant effects on the transportation system.

According to Census figures, Tompkins County grew in population by 2,404 persons between 1990 and 2000, representing an annual average increase of approximately 0.03% (see **TABLE 1**). Seven of the nine Towns in the County had population increases in 2000. In terms of persons gained, the Town of Lansing gained over 13% (1,225 of 9,296) and the Town of Enfield gained over 10% (315 of 3,054). The biggest losers of population were the City of Ithaca (-2.6%), the Town of Caroline (-4.4%), and the Town of Ulysses (-2.7%).

While the total county population continued to increase, by 2,404 new residents over the decade of the 1990's, there are three municipalities that showed a loss in population: the Towns of Caroline and Ulysses and the City of Ithaca. The remaining towns showed a positive change in population. These ranged from a 13.2% increase in the Town of Lansing to a 2.1% increase in the Town of Dryden. In terms of persons gained, the Towns of Ithaca and Lansing had the greatest gains with 913 and 1,225 population increase respectively.

A review of the 1990-2000 population changes by Census-defined "urban" and "rural" areas confirms the notion that Tompkins County continues to become more urbanized demographically (see **TABLE 2**). This is a trend that was noted in the previous Long Range Transportation Plan (LRTP). As the area becomes more urbanized, the travel patterns and behaviors of its residents will continue to change. **TABLE 3** provides a more detailed view of the area's demographic changes in terms of "population density" for the 1990-2000 period, while **TABLE 4** shows similar information for the County's villages.

*Population density* (persons per square mile, based on 2000 Census block data) is presented in **FIGURE 3**. While pockets of urban density can be found throughout the County, representing traditional agricultural-community development patterns, it is apparent from this figure where the urbanized areas (i.e., 1,000 persons/mile<sup>2</sup> or more) lie.

By far the greatest concentration of population lies in the urbanized area of the City of Ithaca. Other population density pockets are centered on the villages of Groton, Dryden and Trumansburg. Furthermore, the map displays how density data can be correlated to several variables: the location of the major employment centers (e.g., Cornell University, Ithaca College, Route 96-B industrial corridor, the CBD, and the northeast industrial corridor); the location of sanitary sewer and water service areas; and the ease and availability of transportation services/infrastructure.

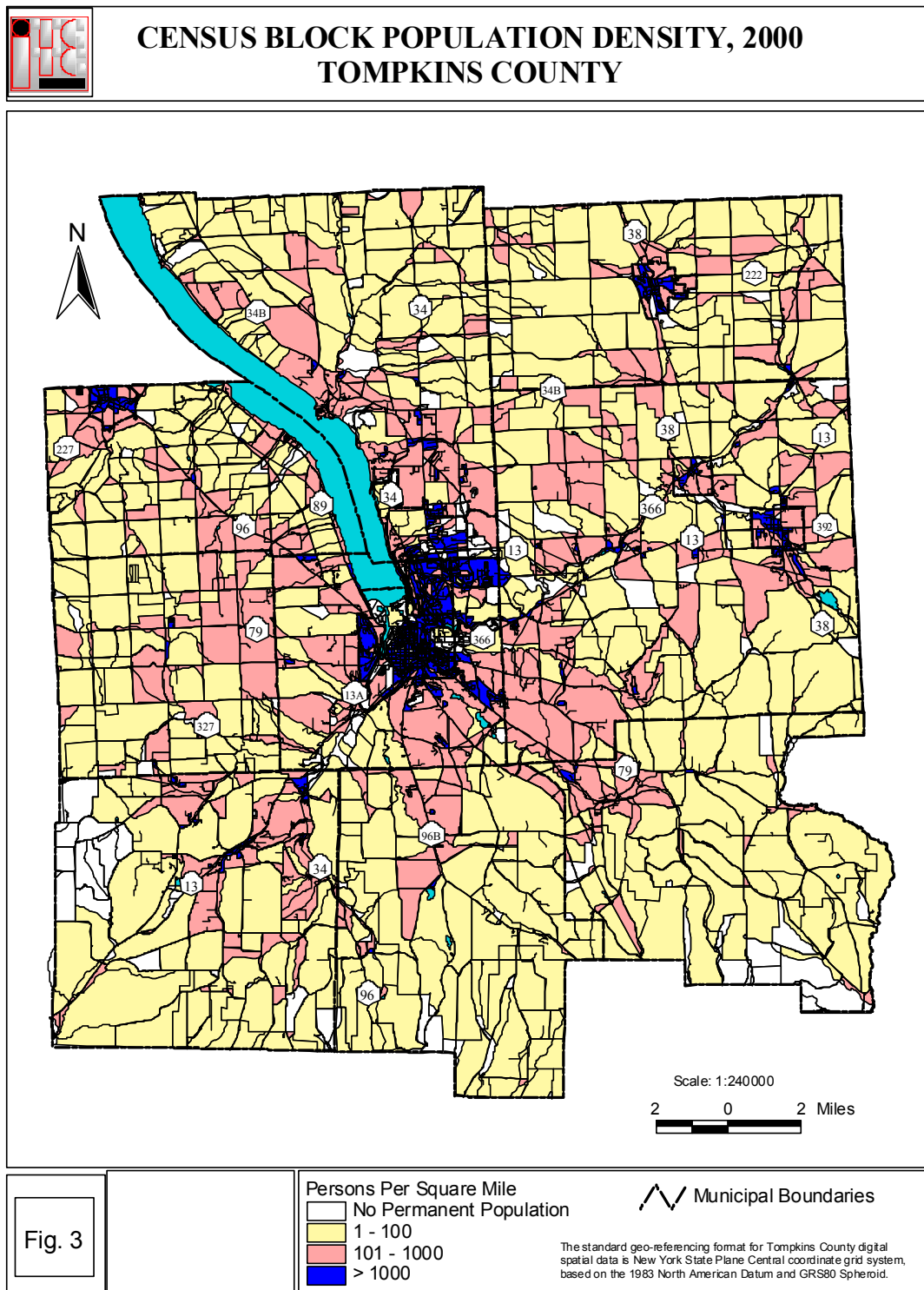
While there is significant debate over the cause of suburban "sprawl", which is usually attributed to the attractions of cheap land and the low cost of automobile transportation, there may be other reasons. According to Edward J. Blakely, Professor of City and Regional Planning at the University of California at Berkeley, "crucial motivations for population and employment losses in central cities, particularly in more recent periods, have been the desire to escape the liabilities and disamenities of the inner city, to belong to a relatively small homogenous community, and to associate with a local government that would fully reflect its residents' preferences for patterns of development, public services, and forms of taxation". (Source: Metropolitan America in Transition: Implications for Land Use and Transportation Planning, FHWA, June 1994). Some of these generalizations may hold true for the trends experienced in the Ithaca urbanized area during the 1980's and 90's, when most of the population growth occurred in the towns and villages surrounding the City of Ithaca. The challenge for local governments will be to recognize these trends and to work to prevent the situation from getting worse.

The number of persons per household is an important factor in determining trip rates for an area. Large families tend to generate fewer trips (per person) than do smaller families because there is a tendency towards increased vehicle occupancy with each trip. In Tompkins County the number of persons per household (pph) decreased from 2.46 in 1990 to 2.32 in 2000. This figure for 1980 was 2.55pph, evidence of the length of this trend (see **TABLE 5**). While these figures are slightly lower than national averages, probably due to the influence of the university community on the area's demographics, they do correspond to national trends towards smaller household sizes.

TABLE 1				
Population Totals for Tompkins County				
Civil Division	1990 Population (% of Total)	2000 Population (% of Total)	Numeric Change (% of Gain)	Percent Change
Town of Caroline	3,044 (3.2%)	2,910 (3.0%)	-134 (-5.6%)	-4.4%
Town of Danby	2,858 (3.0%)	3,007 (3.1%)	+149 (6.2%)	+5.2%
Town of Dryden	13,251 (14.1%)	13,532 (14.0%)	+281 (11.7%)	+2.1%
Town of Enfield	3,054 (3.3%)	3,369 (3.5%)	+315 (13.1%)	+10.3%
Town of Groton	5,483 (5.8%)	5,794 (6.0%)	+311 (12.9%)	+5.7%
City of Ithaca	29,541 (31.4%)	28,775 (29.8%)	-766 (-31.9%)	-2.6%
Town of Ithaca	17,797 (18.9%)	18,710 (19.4%)	+913 (38.0%)	+5.1%
Town of Lansing	9,296 (9.9%)	10,521 (10.6%)	+1,225 (51.0%)	+13.2%
Town of Newfield	4,867 (5.2%)	5,108 (5.3%)	+241 (10.0%)	+5.0%
Town of Ulysses	4,906 (5.2%)	4,775 (5.0%)	-131 (-5.5%)	-2.7%
<b>Total County</b>	<b>94,097 (100.0%)</b>	<b>96,501 (100.0%)</b>	<b>+2,404 (100.0%)</b>	<b>+2.6%</b>
Source: 1990 and 2000 Census				
Note: Village population statistics are included as part of respective Town totals				

TABLE 2				
Population Trends in Urban and Rural Areas				
Census Area	1990	2000	Numeric Difference	Percentage Change
Urban	50,133	53,528	+3,395	+6.8%
Rural	43,964	42,973	-991	-2.3%
<b>Total</b>	<b>94,097</b>	<b>96,501</b>	<b>+2,404</b>	<b>+2.6%</b>
Source: 1990 and 2000 Census				

Figure 3



<b>TABLE 3</b>						
<b>Population, Size and Density Figures for Tompkins County 1990-2000</b> (City of Ithaca and Towns)						
<b>Civil Division</b>	<b>Total Land Area (mi<sup>2</sup>)</b>	<b>1990 Population</b>	<b>1990 Population Density (pop/mi<sup>2</sup>)</b>	<b>2000 Population</b>	<b>2000 Population Density (pop/mi<sup>2</sup>)</b>	<b>1990-2000 Change (pop/mi<sup>2</sup>)</b>
Town of Caroline	55.0	3,044	55.35	2,910	52.91	-2.44
Town of Danby	53.6	2,858	53.32	3,007	56.10	+2.78
Town of Dryden	93.9	13,251	141.12	13,532	144.11	+2.99
Town of Enfield	36.9	3,054	82.76	3,369	91.30	+8.54
Town of Groton	49.6	5,483	110.54	5,794	116.81	+6.27
City of Ithaca	5.5	29,541	5,371.09	28,775	5,231.18	-139.91
Town of Ithaca	29.1	17,797	611.58	18,710	642.95	+31.37
Town of Lansing	60.7	9,296	153.15	10,521	173.33	+20.18
Town of Newfield	58.9	4,867	82.63	5,108	86.72	+4.09
Town of Ulysses	33.0	4,906	148.67	4,775	144.69	-3.98
<b>Total County</b>	<b>476.1</b>	<b>94,097</b>	<b>197.64</b>	<b>96,501</b>	<b>202.69</b>	<b>+5.05</b>
Source: 1990 and 2000 Census						

TABLE 4						
Population Size and Density for the Villages of Tompkins County 1990-2000						
Civil Division	Total Land Area (mi <sup>2</sup> )	1990 Population	1990 Population Density (pop/mi <sup>2</sup> )	2000 Population	2000 Population Density Estimate (pop/mi <sup>2</sup> )	1990-2000 Change Estimate (pop/mi <sup>2</sup> )
Village of Dryden	1.7	1,908	1,122.35	1,832	1,077.65	-44.70
Village of Freeville	1.1	437	397.27	505	459.09	+61.82
Village of Groton	1.6	2,398	1,498.75	2,470	1,543.75	+45.00
Village of Cayuga Heights	1.8	3,457	1,920.56	3,738	2,076.67	+156.11
Village of Lansing	4.6	3,281	713.26	3,417	742.83	+29.57
Village of Trumansburg	1.2	1,611	1,342.50	1,581	1,317.50	-25.00
Source: 1990 and 2000 Census.						

Another interesting observation is the change in household size as a percentage of the total population. **TABLE 5** indicates that the average number of persons per household has decreased significantly; **FIGURE 4** clearly shows how these changes are occurring within the total population. There was a small decline in the number of persons residing in group quarters from 1990 to 2000. In addition, there were reductions in the percentage of total population residing in large families (5+ persons); mid-size households (3 or 4 persons); and two person households. Most striking was the significant increase in the number of one (1) person households in Tompkins County. The effects of these trends can be inferred as: (a) more vehicle trips with lower auto occupancy; (b) the availability of more small household dwelling units; and (c) fewer people residing in families and in communal dwellings.

A summary review of population by age group (see **TABLE 6**) reveals the largest increase occurs in the 45 to 64 year old cohort. An interesting observation in this table is the shift from the 25 to 44 year old group to the 45 to 64 year old group, since 1990. This is reflective of the aging of the baby-boom generation. The phenomenon establishes the trend for a significant portion of the population. The majority of the changes are probably due to natural cohort variation (and the way the cohorts have been reported). The

figures in this table demonstrate the national trend towards our aging society.

Due largely to the influence of the university/colleges, local demographics indicate that there are relatively high rates of education in the Ithaca-Tompkins area. The 2000 Census figures indicate 47.5% (25,187 out of 53,075) of the Tompkins County population aged 25 and older have completed four plus years of college; the corresponding figure for the City of Ithaca is 57.9% (6,222 of 10,744). These figures are correlated to the relative size of the different age groups within the County (see **TABLE 6**).

Tompkins County has a substantial student population of approximately 25,000. The bulk of the students attend Cornell University and Ithaca College, both within the Ithaca urban area. Many of these students are year-round residents, but most reside in Tompkins County only during the school year. Therefore, they create a significant seasonal impact in the demand for services including transportation. ITCTC staff and other transportation professionals in the county are aware of this dynamic. Transportation studies and data gathering efforts are routinely coordinated with student schedules in order to capture the true peak in the travel demand.

TABLE 5								
Persons per Household in Tompkins County								
	Population		Households		Population Change	Household Change	Persons per household (excluding group quarters)	
	1990	2000	1990	2000	1990-2000	1990-2000	1990	2000
<b>Tompkins County</b>	94,097	96,501	33,338	36,420	+2,404 (+2.6%)	+3,082 (+9.3%)	2.46	2.32
Source: 1990 and 2000 Census.								

TABLE 6			
Age of Population in Tompkins County			
Age Group	1990 (% of Total)	2000 (% of Total)	Numeric Difference between 1990 and 2000
<b>0 to 4 years old</b>	5,293 (5.6%)	4,285 (4.4%)	-1,008
<b>5 to 17 years old</b>	12,943 (13.8%)	14,011 (14.5%)	+1,068
<b>18 to 24 years old</b>	25,110 (26.7%)	25,054 (26.0%)	-56
<b>25 to 44 years old</b>	28,914 (30.7%)	25,250 (26.2%)	-3,664
<b>45 to 64 years old</b>	13,372 (14.2%)	18,644 (19.3%)	+5,272
<b>65+ years old</b>	8,465 (9.0%)	9,257 (9.6%)	+792
<b>Total</b>	<b>94,097 (100%)</b>	<b>96,501 (100%)</b>	<b>+2,404</b>
Source: 1990 and 2000 Census.			

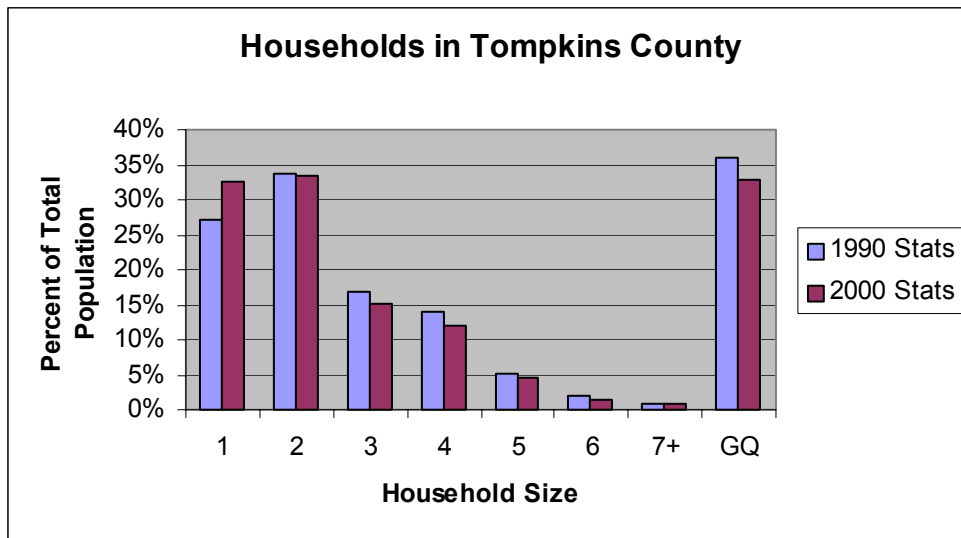


FIGURE 4

#### Employment Characteristics

The Census also reveals that **education** is the leading employment sector in Tompkins County capturing 38.0% (18,292 of 48,192) of the resident workforce. The remainder of the resident workforce is employed as follows: **manufacturing/construction 10.2%** ( 4,920 of 48,192), **retail/wholesale trade 9.3%** ( 4,478 of 48,192), **transportation/communication/public administration 8.2%** ( 3,940 of 48,192), **professional services 8.4%** (4,056 of 48,192), and **other 3.5%** ( 1,680 of 48,192) (see **Table 7**). Fifty-three percent of all households have an annual household income of at least \$35,000.

One of the current activities of the *ITCTC* is to maintain an employer-based information that provides current employment information (i.e., number of jobs) at a Traffic Analysis Zone level of detail. This information, which has been provided by the United States Bureau of the Census in its 2000 Census Transportation and Planning Package, is crucial to the development of a travel demand model. **TABLES 7** and **8** provide employment information from the Census based on number of employees. A review of **TABLE 7** reveals a reduction in employment across many sectors with parallel increases concentrated in *educational and health services* and *communications, transportation and other utilities*. Overall, the data indicates a gain in resident employment of 2,136 from 1990 to 2000. The data in this table is not reflective of the increased activity in the retail sector that has been evident in Tompkins County since the year 2000. Expansion of Pyramid Mall and, new development in the Southwest Area and in the Downtown of the City of Ithaca are expected to have a significant impact on the retail sector. Most of these projects will be completed by 2005. The *ITCTC* will continue to monitor these

developments and work with local municipalities and agencies to address transportation issues.

While the impacts of economic trends need further study, they can be expected to have an impact on transportation. For example, it is well known that different types of businesses have different trip generation potential; major retail centers will have higher trip generation impacts than will basic manufacturing locations (i.e., shoppers versus employees). In general, it can be inferred that the changes in the composition of the Tompkins County job market have had some impact on the increased number of trips and travel levels experienced in the area.

Other observations can be made regarding the socioeconomic profile of the County's residents. For instance, the unemployment rate in Tompkins County is consistently one of the lowest in the State of New York, and yet there are still many pockets of poverty. While the influences of the college/university include economic stability, the cost of living in Tompkins County is relatively high, affecting housing and transportation decisions. The high cost of living also results in reduced discretionary income affecting retail and other sectors of the economy.

Population increases and low unemployment have resulted in increased demand and price pressure on the housing market (pushing people further out of urban areas, creating sprawl or longer trip lengths). This has resulted in higher tax and service fees in the core urban areas as they cope with the loss of tax base while retaining the same service and infrastructure maintenance costs. While this plan does not directly address these issues, it is important to recognize the potential effects of this particular type of service-based economy, particularly on transportation and energy issues.

TABLE 7				
Employment of Tompkins County Residents Age 16+				
Economic Sector	1990	2000	Numerical Change	Percent Change
Agriculture, Forestry, Fishing, Mining	1,328	929	-399	-10.1%
Construction	1,992	1,545	-447	-22.4%
Manufacturing	4,290	3,375	-915	-21.3%
Transportation and Utilities	886	1,169	+283	+31.9%
Communications & Other Public Utilities	843	1,507	+664	+78.8%
Wholesale Trade	627	518	-109	-17.3%
Retail Trade	6,560	3,960	-2600	-39.6%
Finance, Insurance, & Real Estate	1,903	1,515	-388	-20.4%
Personal, Arts, Entertainment, Recreational and Food Services	3,189	3,993	+804	+25.2%
Professional and Scientific Services	n/a	4,056	n/a	n/a
Educational, and Health Services	19,898	22,681	+2783	+14.0%
Other Professional and Related Services	3,540	1,680	-1860	-52.5%
Public Administration	1,000	1,264	+264	+26.4%
<b>Total</b>	<b>46,056</b>	<b>48,192</b>	<b>+2,136</b>	<b>+4.6%</b>
Source: 1990 and 2000 Census.				

TABLE 8				
Gender Employment Statistics				
Tompkins County	1990	2000	Numerical Change	Percent Change
Civilian Males Employed in Labor Force	23,891 (51.8%)	24,556 (51.0%)	+665	+2.8%
Civilian Females Employed in Labor Force	22,165 (48.1%)	23,636 (49.0%)	+1,471	+6.6%
<b>Total</b>	<b>46,056 (100%)</b>	<b>48,192 (100%)</b>	<b>+2,136</b>	<b>+4.6%</b>
Source: 1990 and 2000 Census.				

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## TRAVEL TRENDS & CHARACTERISTICS

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### General Travel Trends

This section presents information based on data from the 1995 *National Personal Transportation Surveys* (NPTS) and the 2001 *National Household Transportation Survey* (NHTS). The NHTS data include information specific to the Ithaca urbanized area. Data sources are identified throughout the text and tables. This is the most recent locally generated trip based data available for development of the 2025 LRTP. One of this plan's recommended projects for implementation includes performing a new travel survey for Tompkins County, which will generate updated travel related data.

For preparation of the original Long Range Plan the *ITCTC* acquired the data sets that were created following the completion of a travel survey of Tompkins County residents in 1988. Complications associated with the way in which the data was coded limited its interpretation and made comparison with the 1990 NPTS data exceedingly difficult (in some cases the data was re-aggregated in an attempt to force compatibility. For the current LRTP update the 1995 NPTS and 2001 NHTS, including their New York State Add-On, Ithaca MPO Add-on and tabular summaries and graphics for the Ithaca Urban Area, were used for comparisons. These data sources include information for New York State in addition to national and Tompkins County figures. These were included in the analysis where appropriate.

The data limitations that existed during preparation of the original Long Range Plan, particularly the lack of recent travel survey data, remain. However, the data that is available through the census, NPTS and NHTS continue to provide an excellent starting point for the analysis of general travel trends and characteristics in the greater Ithaca-Tompkins County area.

**TABLE 9** compares the 1995 and 2001 national, state and local data on the basis of Person Trips by Trip Purpose (reported in relative percentages). Tompkins County had a reduction in the percentage of **Work Trips** between 1995 and 2001. Some of this difference may be a result of the use of different data sets. The 2001 figure for work trips in Tompkins County (17.80%) is just below comparable NPTS figures for New York State (18.40%) and almost even with the nationwide figure (17.7%). **Family and Personal Business** trip purposes account for the most trips nationally (45.86%), in New York State (43.96%) and within the County (42.86%). The 2001 national and local trends for the other trip purposes seem to be relatively comparable: **Educational & Religious** (National=9.80%, Tompkins County=11.47%); **Social and Recreational** (National=27.1%, Tompkins County = 26.70%); and **Miscellaneous** (National=0.8%, Tompkins

County=1.17%). The higher than state and national numbers for the *Educational & Religious* category is probably due to the large number of students associated with the three institutes of higher learning found in the county.

Work Trips are most responsible for peak hour traffic trends by the way they cluster in the mornings and evenings. Generally, peak hours are congruent to “rush hour”, or the period of time when the majority of people are on their way to or from work. For this reason they receive much of the attention of planners and engineers seeking to address congestion at peak times. However, the bulk of trips on our roadways (approximately 80%) are not work related. These trips also need to be considered when determining travel trends and characteristics.

Person Trips by Mode of Transportation figures are presented in **TABLES 10** comparing 1995 and 2001 estimates. Some important trends from the comparison include a reduction in the use of **Private Vehicles** as a percentage of trips per day in Tompkins County, from 88.7% in 1990 (per 2020 LRTP) to 83.2% in 1995 to 80.33% in 2001. In contrast, the national figures for this category changed from 87.1% in 1990 (2020 LRTP) to 89.3% in 1995 to 86.5% in 2001. **Walking** as a mode of transportation showed increase percentages from 1995 to 2001 in the National, State and County figures. County increases in the percent of Walk trips date back to 1990 at 7.8%, compared to 1995 (10.68%) and 2001 (14.99%). **Bicycle** use went from being below the national average to being almost 50% above from 1990 to 1995 (2020 LRTP). The 2001 bicycle figure show a slight reduction from 1.46% to .94%, which is still above the State average.

The **Public Transportation** figures remain slightly below the national average in the 1995 to 2001 comparison. However, this is one area where there have been substantial transit change and service improvements since that data was collected. TCAT figures indicate that total annual transit ridership has been increasing steadily from a low of 2.04 million in 1992 to 2.83 million in 2003, a 28% increase. The period since the TCAT reorganization in 1999 to 2003 has seen a ridership increase of 16%. Unfortunately these changes are not reflected in the 2001 NHTS because the transit service changes were not implemented at the time the survey was executed.

TABLE 9						
Person Trips per Day by Trip Purpose – 1995 & 2001 estimates						
Trip Purpose	National		New York State		Tompkins County	
	1995	2001	1995	2001	1995	2001
Work	20.26%	17.7%	19.85%	18.40%	19.63%	17.80%
Family and Personal Business	45.86%	44.6%	45.88%	43.96%	44.52%	42.86%
Educational / Religious	8.80%	9.8%	9.28%	9.89%	11.42%	11.47%
Social and Recreational	24.91%	27.1%	25.00%	26.65%	24.20%	26.70%
Miscellaneous	.16%	.8%	0.00%	1.10%	.23%	1.17%
Sources: <u>Nationwide Personal Transportation Survey 1995; 2001 National Household Travel Survey; 2001 National Household Travel Survey, New York Add-On – Ithaca MPO</u>						

TABLE 10						
Trips per Person per Day by Mode of Transportation – 1995 & 2001 estimates						
Mode of Transportation	National		New York State		Tompkins County	
	1995	2001	1995	2001	1995	2001
Private Vehicle	89.34%	86.5%	70.27%	65.6%	83.25%	80.33%
Public Transportation*	1.81%	1.5%	9.73%	10.0%	1.46%	1.17%
Walk	5.55%	8.6%	15.41%	20.1%	10.68%	14.99%
Bicycle	.91%	n/a	.81%	.7%	1.46%	0.94%
Other	2.39%	3.4%	3.78%	3.4%	3.16%	2.58%
Sources: <u>Nationwide Personal Transportation Survey 1990 Databook Volume 1, FHWA, Publication No. FHWA-PL-94-010A; and Nationwide Personal Transportation Survey 1995; 2001 National Household Travel Survey; 2001 National Household Travel Survey, New York Add-On – Ithaca MPO</u>						
*TCAT data indicate recent substantial increases in ridership that are not captured in this table. See the last paragraph of page 1.13.						

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### **Commutation**

Tompkins County is a net income exporter. This situation indicates that the number of non-resident workers in Tompkins County is greater than the number of people who reside in Tompkins County and work outside the county (see **TABLE 11**). Based on the 2000 Census the total number of persons working within Tompkins County was 57,032 while the number of persons that live and work in Tompkins County is only 43,319. Slightly over 8.6% (4,075 of 47,394) of Tompkins County's resident workers commuted out of the county for work in 2000. This percentage is very close to that from 1990, 8.28%. Meanwhile over 13,713 or 24% of total workers engaged in Tompkins County commuted from more than eight other counties. This is an increase from the figure of 21% in 1990 and represents an increase of 2,332 additional workers commuting into Tompkins County between 1990 and 2000. Tioga County contributed the greatest number of workers to Tompkins County (2,846) followed closely by Cortland County (2,605), while Cortland County received the most workers (1,516) from Tompkins County.

Similar trends to those described above were reported in the 2020 LRTP using 1980 and 1990 Census data. This provides strong and persistent evidence of Tompkins County as a regionally important center of economic activity.

*Note: Tables 7 and 11 show a difference of 798 in the number of resident workers in Tompkins County (48,192 vs. 47,394). This is due to differing rates of response to Census questions and is the way the Census Bureau is reporting the information. The tables do not combine data from the different Census questions and thus remain internally consistent.*

### **Journey-to-Work**

The U.S. Census collected journey-to-work data as part of Census 2000. This data is the best available information for the LRTP and can be referenced until local travel surveys can be completed.

**TABLE 12** provides 2000 Census information on the distribution of the work trips by mode for each town in Tompkins County. This table gives a good indication of where the largest numbers of users for each mode are located. This information is useful in determining potential current and future demand for bicycle facilities, pedestrian facilities, carpooling programs, transit routes, and other facilities at a localized scale.

The Census counts only one work trip for each worker and assumes that all work trips originate at home and terminate at the work site. The journey-to-work data indicate that in Tompkins County 59.8% of the workforce drive alone to work, while 12.2% carpool. In total 72% of the workforce use private vehicles in their commute to

work. This figure can be compared to data from 1995 and 2001, which are estimated at 81.4% and 86.8% respectively (1995 NPTS and 2001 NHTS). Although derived from different sources, the data appear comparable in their magnitude and reflect a continuing downward trend in the number of the workforce using private vehicles in their trip to work.

Countywide data for other modes of transportation used in the journey to work show that 16.8% walk to work, 4.8% use public transportation, 1.5% bicycle or use other means. A total of 5.1% of workers reported working at home.

It is important to note particularly that the walking to work percentage for Tompkins County (16.8%) is substantially higher than the national and state averages of 2.9% and 6.2% respectively (see **TABLE 12**).

While it may seem that the recommendations of this Plan place an unusually high emphasis on transit, bicycle and pedestrian strategies and investments, consider the following. When combined into a category termed by some as "alternative modes of transportation", transit, pedestrian and bicycle trips account for the following percentages of work trips: 8% for the U.S., 31% for New York State, and 22% for Tompkins County. The figures for New York State are skewed by the disproportionately large participation in public transportation in New York City. Regardless, the 22% figure for Tompkins County represents a significant number of trips that are taking place with minimal impact on congestion levels. Carpooling, which comprises 12% of the journey to work trips, also contributes to increased system efficiency.

As explained in the TDM Encyclopedia, a resource of the Victoria Transport Policy Institute, "traffic congestion is a non-linear function, meaning that a small reduction in urban-peak traffic volume can cause a proportionally larger *reduction in delay*. For example, a 5% reduction in traffic volumes on a congested highway such as from 2,000 to 1,900 vehicles per hour may cause a 10-30% reduction in delay. As a result, *even relatively small changes in traffic volume on congested roads can provide relatively large reductions in traffic delay*" (Victoria Policy Transport Institute, 2003). Therefore, policies and project that move trips from automobiles to alternative modes will result in a reduction in congestion and improved performance of the roadway system. Additional secondary benefits will result from lower emissions, more active lifestyles, reduced energy consumption, reduce costs in roadway system expansion, etc.

While the point has been made several times in this report that there is a dire need for additional travel data information, particularly for alternative modes, it is important to appreciate the important role that these

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modes of transportation play in the local transportation system.

In summary, the general travel patterns for the greater Ithaca-Tompkins County show increases in walking, public transportation, and bicycling for most purposes and particularly for the means of transportation to work. Based on historic data the national trends continue to point towards increases in total person trips, person miles of travel, and vehicle miles of travel. These trends, combined with limited local financial resources and the growing evidence of the negative externalities of continued over dependency on the automobile as the principal mode of transportation, has made it particularly important to understand and seek to maximize the role of transportation modes that serve as alternatives to the automobile.

### **Vehicle Population**

Statistics compiled by New York State Department of Motor Vehicles Data Processing show the number of passenger cars registered in Tompkins County for 1996 to be 56,782, 56,696 in 1997, 56,653 in 1998, 57,130 in 1999, 58,432 in 2000, 59,624 in 2001 and 63,316 in 2002 (see **TABLES 13 and 14**). This is an increase of almost 11.50% over a 6-year period. This figure amounts to approximately 1.7 cars for every household in the County. The increase in number of vehicles is reflected in increased levels of traffic and congestion on Tompkins County's roads.

The 2000 Census data provides information on the number of "vehicles available", defined by the Census as: *"the number of passenger cars, vans, and trucks of one ton capacity or less kept at home and available for the use of the household members"*. Vehicles that are rented or leased for one month or more, company vehicles and police and government vehicles are included if they are kept at home for non-business purposes. Dismantled or immobile vehicles are excluded. Vehicles that are kept at home but used only for business purposes are excluded". There is a crucial difference between vehicles registered and vehicles available, particularly in an area with a large college student population. **TABLE 15** provides information on population, households, vehicles available and vehicles per person for the County. This information is of particular interest if compared to historic, national trends. The Census provides data on Vehicles Per Household (VPHH). In 2000 the average VPHH the U.S. was 1.2, in 1990 that figure was 1.66. Corresponding data for Tompkins County shows 1.53 VPHH in 2000 and 1.58 in 1990. The reduction in VPHH from Census data is a deviation in the trend towards increasing VPHH that was evident at least since the 1960 Census. (VPHH: 1960=1.03; 1980=1.61). It is unclear if this downward shift will result in a sustained trend, or if it is the result of any specific action. Regardless, agencies in Tompkins County should continue to implement programs that

reduce car dependency and support the efficiencies inherent in an integrated multimodal transportation system.

### **Driving Population**

In Tompkins County there were 60,479 driver's licenses in force in 2002. The rate of growth in the number of driver's licenses has remained relatively steady over the period from 1980 to 2002. During the 1980's the number of driver's licenses increased at a rate of 1% per year; from 1990 to 2002 the rate was 1.11%. This represents a 22% increase since the 1980 totaling 11,052 new driver's licenses issued over that time period. (see **TABLE 16**).

### **Trip Length**

Trip length is a function of the time, speed, and distance of the average trips, by trip type, in a given study area. Trip length is usually reported in terms of time or distance. Trip length statistics are best obtained as part of a travel survey effort. Such data does not currently exist for Tompkins County.

However, the Census gathers data on travel time to work as part of its Journey-to-Work effort. As explained before, the Journey-to-Work data is of importance to transportation planning because of its impact on the peak travel period.

**FIGURES 5 and 6** look at a subset of the population: percent of workers over age 16 not working at home. This is the same data shown in tabular form in **TABLE 17**. Figure 5 shows the total number of workers by travel time to work segment, **FIGURE 6** shows percentages of workers in each category.

The general distribution of workers across travel time categories has not changed dramatically as can be seen in Figure 5. With the increase in the number of total workers there is a corresponding increase across most time periods except <5 minutes and 30-44 minutes. However, the pattern continues unchanged where the bulk of the workers in Tompkins County take from 10 to 30 minutes to reach their place of employment.

The percentage figures in **TABLE 17** show an interesting pattern. The only travel time categories to increase their proportion of the total are the 45-59 minutes and 60+ minutes. This may be reflective of the continuing and growing trend for Tompkins County to serve a regional center of employment. Congestion and changes in mode choice (e.g., transit may be slower than a private automobile) may also contribute to the increase in the higher travel time to work categories.

### **Traffic Accidents**

The Bureau of Transportation Statistics reports in the Transportation Statistics Annual Report 2000 that despite

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the continued increase in the number of vehicles registered, number of licensed drivers, and the amount of vehicle miles of travel, the 1999 fatality rate for all highway modes continued to decline. The Bureau explains that “many factors may interact to explain the decreasing fatality rates. For highway modes, promotion of safety belt, child safety seat, and motorcycle helmet usage, and measures to discourage drunk driving have all had a beneficial effect. So, too, have improvements in vehicle and highway design and greater separation of traffic. Finally, some of the decrease in transportation fatalities may be a consequence of better and prompt medical attention for victims of transportation crashes and accidents.”

Bicycles follow a similar pattern, while bicycle fatalities have declined, the U.S. Department of Transportation’s 1995 Nationwide Personal Transportation Survey shows that bicycle trips more than doubled—from 1.3 billion to 3.3 billion trips between 1977 and 1995

Tompkins County statistics (**see Table 18**) that include fatal accidents, personal injury accidents and property damage accidents supports this national trend reflecting the need and benefits of safety improvements and programs. The Transportation Statistics Annual Report 2000 states that “the more people travel, the greater the risk they incur. Thus, using the absolute numbers of fatalities to compare the safety of a given mode over time can be misleading, since any change in the fatality numbers might be explained by a change in the amount of transportation activity.” When looking at **Table 18** it is important to read the data for the different types of accidents in the columns showing the accident types as percentages of the total reportable accidents. The percent of fatal accidents and personal injury accidents show marked reductions from 1996 to 2000. Even the actual number of deaths is reduced from 16 to 6 in those years.

### **Public Transportation**

Tompkins County is served by multiple local, regional and intercity public transportation providers. Before the creation of Tompkins Consolidated Area Transit during 1996-98, there were three local public transit systems operating in Tompkins County. The City of Ithaca operated Ithaca Transit since 1962, Cornell University began its campus bus service in 1966, and Tompkins County created TOMTRAN in 1981. The three systems operated independently but cooperatively until TCAT was organized in 1998.

Tompkins Consolidated Area Transit (TCAT) was authorized by the New York State Legislature in 1996 and formed by agreement between the City of Ithaca, Cornell University and Tompkins County in 1998 to consolidate public transit service in Tompkins County. In 2004, the New York State Department of Transportation directed TCAT to become a single employer. Since legislation to

recreate TCAT, as a public benefit corporation was unsuccessful, TCAT was reorganized as a not-for-profit corporation effective January 1, 2005.

TCAT operates thirty-eight bus routes directly and under a third party contract with Tioga Transport, Inc. Since TCAT implemented its Service and Fare Consolidation Project in 1999 it has seen a significant increase in transit service and ridership countywide. TCAT continues to refine and modify its bus routes and fares to accommodate new ridership demand and improve service.

A demand-responsive, door-to-door service is available to senior citizens, persons with disabilities, and those eligible for ADA paratransit through GADABOUT Transportation Services Inc. GADABOUT is a local, not-for-profit transportation corporation GADABOUT works closely with TCAT to manage and operate TCAT’s ADA paratransit program.

In addition to bus transportation, other local private operators serve Tompkins County: Ithaca Dispatch (taxi operator), Ithaca Airline Limousine (airport shuttle) and Swarthout Coaches, Inc. (charter bus).

Regional commuter bus routes operated and managed by First Transit, Inc. serve Tompkins County from Cortland, Tioga, Chemung and Schuyler Counties. Further, intercity bus service to Tompkins County operated by Adirondack Trailways, Greyhound Bus Lines and Shortline/Coach USA link the County with regional and national bus networks.

**TABLE 11**

<b>TOMPKINS COUNTY COMMUTATION PATTERNS</b>	<b>Total 1990</b>	<b>Total 2000</b>	<b>Percent 1990</b>	<b>Percent 2000</b>
<b>Persons working in Tompkins County</b>	<b>52,815</b>	<b>57,032</b>	-----	-----
<b>Workers living in Tompkins County</b>	<b>45,175</b>	<b>47,394</b>	-----	-----
<b>NET INCOMMUTATION</b>	<b>7,640</b>	<b>9,638</b>	-----	-----
<b>Persons living in Tompkins County and working in:</b>				
Tompkins County	41,434	43,319	91.7%	91.4%
Cortland County	1,617	1,516	3.6%	3.2%
Cayuga County	275	297	0.6%	0.6%
Chemung County	266	442	0.6%	0.9%
Onondaga County	191	299	0.4%	0.6%
Seneca County	226	196	0.5%	0.4%
Tioga County	179	217	0.4%	0.5%
Schuyler County	96	110	0.2%	0.2%
Broome County	184	244	0.4%	0.5%
Other	707	754	1.6%	1.6%
<b>Persons working in Tompkins County and living in:</b>				
Tompkins County	41,434	43,319	78.5%	76.0%
Tioga County	2,536	2,846	4.8%	5.0%
Schuyler County	1,642	1,608	3.1%	2.8%
Cortland County	1,755	2,605	3.3%	4.6%
Cayuga County	1,372	1,814	2.6%	3.2%
Seneca County	1,163	1,289	2.2%	2.3%
Chemung County	856	970	1.6%	1.7%
Onondaga County	222	500	0.4%	0.9%
Broome County	261	383	0.5%	0.7%
Other	1,574	1,698	3.0%	3.0%

Source: 1990 and 2000 Census.

**TABLE 12**

**Means of Transportation to Work**

<b>Civil Division</b>	<b>Drive Alone</b>	<b>Carpool</b>	<b>Public Transportation</b>	<b>Bicycle</b>	<b>Walk</b>	<b>Work at Home</b>	<b>Other</b>	<b>Total</b>
<b>Town of Caroline</b>	966 (69.7%) (3.4%)	184 (13.3%) (3.2%)	70 (5.1%) (3.1%)	10 (0.7%) (2.4%)	23 (1.7%) (0.3%)	124 (8.9%) (5.1%)	10 (0.7%) (4.9%)	1,387 (100.0%) (2.9%)
<b>Town of Danby</b>	1,241 (70.8%) (4.4%)	411 (23.4%) (7.1%)	9 (0.5%) (0.4%)	0 (0.0%) (0.0%)	22 (1.3%) (0.3%)	70 (4.0%) (2.9%)	0 (0.0%) (0.0%)	1,753 (100.0%) (3.7%)
<b>Town of Dryden</b>	5,451 (75.7%) (19.2%)	1,005 (14.0%) (17.4%)	141 (2.0%) (6.2%)	19 (0.3%) (4.6%)	204 (2.8%) (2.6%)	355 (4.9%) (14.6%)	24 (0.3%) (11.7%)	7,205 (100.0%) (15.2%)
<b>Town of Enfield</b>	1,290 (75.5%) (4.6%)	255 (14.9%) (4.4%)	26 (1.5%) (1.1%)	0 (0.0%) (0.0%)	30 (1.8%) (0.4%)	100 (5.9%) (4.1%)	10 (0.6%) (4.9%)	1,709 (100.0%) (3.6%)
<b>Town of Groton</b>	2,081 (72.0%) (7.3%)	476 (16.5%) (8.2%)	66 (2.3%) (2.9%)	0 (0.0%) (0.0%)	64 (2.2%) (0.8%)	171 (5.9%) (7.1%)	30 (1.0%) (14.6%)	2,890 (100.0%) (6.1%)
<b>City of Ithaca</b>	4,767 (35.8%) (16.8%)	1,074 (8.1%) (18.6%)	1,050 (7.9%) (45.9%)	240 (1.8%) (58.5%)	5,493 (41.2%) (69.1%)	658 (4.9%) (27.1%)	54 (0.4%) (26.3%)	13,335 (100.0%) (28.1%)
<b>Town of Ithaca</b>	4,757 (54.3%) (16.8%)	984 (11.2%) (17.0%)	532 (6.1%) (23.3%)	115 (1.3%) (28.1%)	1,892 (21.6%) (23.8%)	427 (4.9%) (17.6%)	60 (0.7%) (29.3%)	8,768 (100.0%) (18.5%)
<b>Town of Lansing</b>	4,033 (75.2%) (14.2%)	749 (14.0%) (13.0%)	251 (4.7%) (11.0%)	0 (0.0%) (0.0%)	66 (1.2%) (8.3%)	253 (4.7%) (10.4%)	10 (0.2%) (4.9%)	5,361 (100.0%) (11.3%)
<b>Town of Newfield</b>	2,058 (79.5%) (7.3%)	322 (12.4%) (5.6%)	82 (3.2%) (3.6%)	4 (0.2%) (1.0%)	34 (1.3%) (0.4%)	90 (3.5%) (3.7%)	0 (0.0%) (0.0%)	2,590 (100.0%) (5.5%)
<b>Town of Ulysses</b>	1,695 (70.8%) (6.0%)	319 (13.3%) (5.5%)	59 (2.5%) (2.6%)	19 (0.8%) (4.6%)	123 (5.1%) (1.5%)	177 (7.4%) (7.3%)	4 (0.2%) (2.0%)	2,396 (100.0%) (5.1%)
<b>Tompkins County</b>	28,339 (59.8%) (100.0%)	5,779 (12.2%) (100.0%)	2,286 (4.8%) (100%)	410 (0.74%) (100.0%)	7,951 (16.8%) (100.0%)	2,425 (5.1%) (100.0%)	205 (0.7%) (100.0%)	47,394 (100.0%) (100.0%)
<b>New York State</b>	56.3%	9.2%	24.4%	.39%	6.2%	3.0%	.77%	100%
<b>National – US</b>	75.7%	12.2%	4.7%	.44%	2.9%	3.3%	.85%	100%

Source: 2000 Census. Percentages may not add to 100% due to rounding.

Note: Row percentages are provided to the right of the numeric entry, while column percentages appear below the number.

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**TABLE 13****Total Vehicle Registrations in Tompkins County**

<b>Year</b>	<b>Personal Vehicles</b>	<b>Commercial Vehicles</b>	<b>Trailers</b>	<b>Motor -cycles</b>	<b>Mopeds</b>	<b>Busses</b>	<b>Taxi</b>	<b>Ambu-lance</b>	<b>Rental Cars</b>	<b>Farm</b>	<b>Total</b>
<b>2002</b>	48,644	9,910	2,638	1,823	97	34	67	9	41	53	63,316

Source: New York State Department of Motor Vehicles Data Processing.

**TABLE 14****Total Vehicle Registrations**

	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b>Tompkins County</b>	56,782	56,696	56,653	57,130	58,432	59,624

Source: New York State Department of Motor Vehicles Data Processing.

**TABLE 15****Vehicles Available and Vehicles per Person**

<b>Civil Division</b>	<b>Population</b>	<b>Households</b>	<b>Vehicles Available</b>	<b>Vehicles Per Person</b>	<b>Vehicles Per Household</b>
Town of Caroline	2,910 (3.2%)	1,161 (3.5%)	1,901 (4.1%)	0.65	1.64
Town of Danby	3,007 (3.0%)	1,187 (3.1%)	2,216 (3.9%)	0.74	1.87
Town of Dryden	13,532 (14.1%)	5,455 (15.1%)	9,364 (16.7%)	0.69	1.72
Town of Enfield	3,369 (3.3%)	1,323 (3.3%)	2,408 (3.9%)	0.72	1.82
Town of Groton	5,794 (5.8%)	2,168 (5.8%)	3,823 (6.4%)	0.66	1.76
City of Ithaca	28,775 (31.4%)	10,287 (28.9%)	12,081 (22.3%)	0.42	1.17
Town of Ithaca	18,710 (18.9%)	6,427 (17.6%)	9,632 (17.5%)	0.52	1.50
Town of Lansing	10,521 (9.9%)	4,374 (11.4%)	7,394 (12.4%)	0.70	1.69
Town of Newfield	5,108 (5.2%)	2,052 (5.7%)	3,538 (6.5%)	0.69	1.72
Town of Ulysses	4,775 (5.2%)	1,986 (5.6%)	3,291 (6.3%)	0.69	1.66
<b>Total County</b>	<b>96,501 (100.0%)</b>	<b>36,420 (100.0%)</b>	<b>55,648 (100.0%)</b>	<b>0.58</b>	<b>1.53</b>

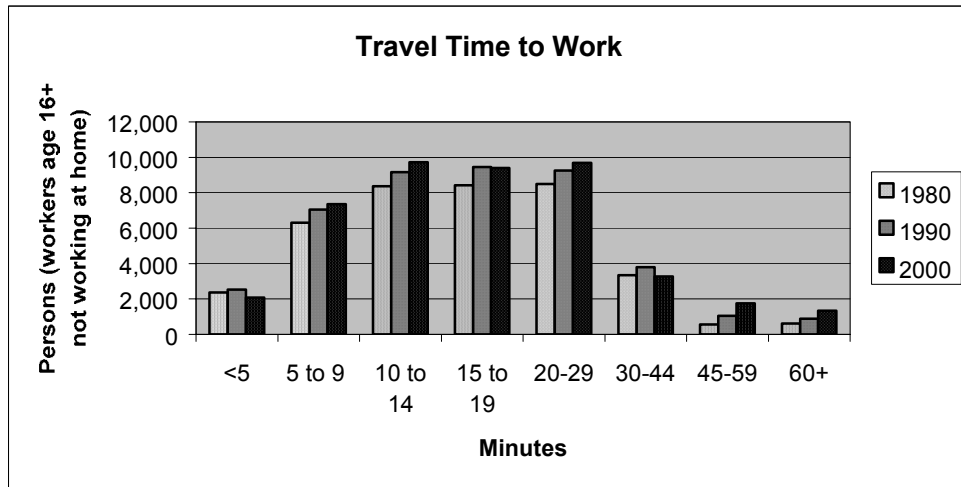
Source: 2000 Census

**TABLE 16**
**Tompkins County**  
**Total Number of Driver's Licenses**  
**(1980-2002)**

<b>1980</b>	49,427
<b>1988</b>	52,996
<b>1989</b>	53,350
<b>1990</b>	54,405
<b>1998</b>	56,653
<b>2002</b>	60,479
<b>Annual Average % Change (1980-1990)</b>	1.0%
<b>Annual Average % Change (1990-2002)</b>	1.11%

Source: Motor Vehicle, Registrations,  
Licenses and Fees Collected; New York State  
Department of Motor Vehicles

**Figure 5**



**Figure 6**

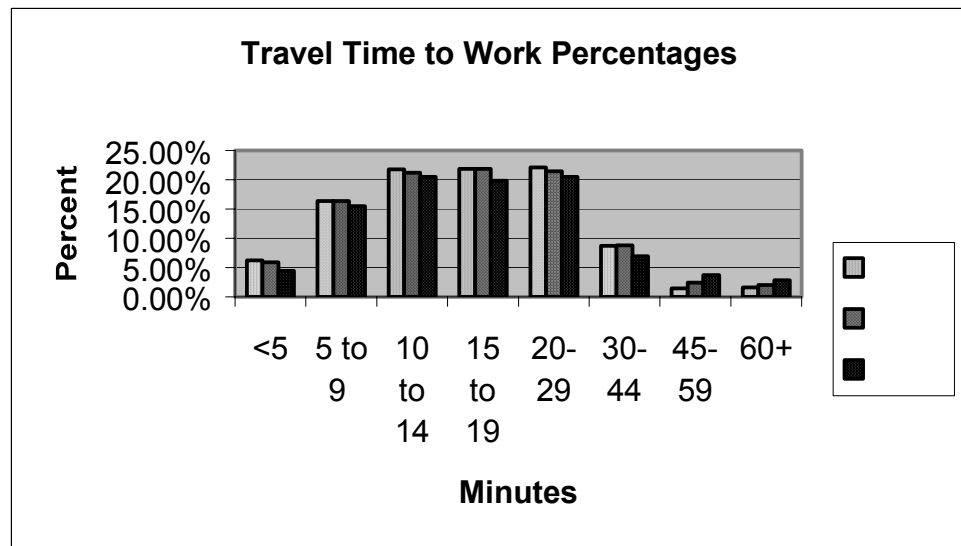


TABLE 17			
Travel Time to Work (Workers Age 16+, Not Working at Home)			
Travel Time (minutes)	1980 (% of Total)	1990 (% of Total)	2000 (% of Total)
0 – 4	2,376 (6.2)	2,529 (5.9%)	2,084 (4.4%)
5 – 9	6,311 (16.4)	7,057 (16.3%)	7,349 (15.5%)
10 – 14	8,376 (21.7)	9,171 (21.2%)	9,717 (20.5%)
15 – 19	8,421 (21.9)	9,449 (21.9%)	9,395 (19.8%)
20 – 29	8,494 (21.4)	9,252 (21.4%)	9,691 (20.45%)
30 - 44	3,345 (8.8)	3,792 (8.7%)	3,268 (6.9%)
45 - 59	565 (2.43)	1,051 (2.4%)	1,749 (3.7%)
60+	615 (2.05)	884 (2.1%)	1,343 (2.8%)
<b>Total</b>	<b>38,503</b>	<b>43,185</b>	<b>47,394</b>
Source: 1980, 1990 and 2000 Census			

TABLE 18									
Accident Frequency Rate for Tompkins County									
Year	Fatal Accidents	Percent Fatal	Personal Injury Accidents	Percent PI	Total Deaths	Total Injuries	Property Damage Accidents	Percent Property Damage	Total of Reportable Accidents
00	6	0.23%	740	28.89%	6	1,024	1,815	70.87%	2,561
99	5	0.23%	715	32.77%	7	991	1,462	57.09%	2,182
98	6	0.37%	623	38.91%	6	933	972	37.95%	1,601
97	11	0.86%	705	55.08%	12	990	564	22.02%	1,280
96	13	1.08%	710	58.87%	16	1,029	483	18.86%	1,206
Source: New York State Department of Motor Vehicles Data Processing.									